REMARKS

Claims 13-36 were pending in the present application. Claims 13-19 have been cancelled without prejudice or disclaimer, and claims 37-40 have been added. Therefore, claims 20-40 are pending in the present application.

Support for the subject matter of claims 37-40 can be found at paragraphs 19 and 20 of the substitute specification. Moreover, support for claim 40 can be found from the required degree of red, green, yellow and blue required to determine the "L-value" of a steel wire, as is readily understood by one of ordinary skill in the art.

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons which follow.

Interview of November 25, 2003

Applicants thank Examiner Gray for extending the courtesy of an interview on November 25, 2003, where the Examiner agreed "that the limitations of 'drawn wire' in claim 25 may overcome the Creps reference" and where the Examiner agreed to consider all arguments raised upon the submission of this response.

Supplemental Amendment of July 16, 2003

Applicants note that the claims 25-36, added via the supplemental amendment filed on July 16, 2003, were not considered in the present office action. A copy of the supplemental amendment was faxed to Examiner Gray on November 24, 2003, the claims of which were considered and discussed during the November 25, 2003 interview. During the interview, Examiner Gray indicated that she preferred the new claims to those previously pending in the present application.

Attached to this paper, in Appendix A, is a copy of the July 16, 2003 response, along with a stamped post card evidencing the filing and receipt of the amendment by the PTO on July 16, 2003.

In formulating this response, Applicants have treat d the claims of the supplemental amendment as pending in the present case, assuming that the rejections of claims 13-24 would have been made against claims 25-36 as well, had the PTO considered those claims, and have provided arguments as to why the claims of the supplemental amendment are allowable in view of the cited references.

Claim Rejections Under 35 U.S.C. §103(a)

In the Office Action, Claims 13 -24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Takazawa (USP 4,774,105) in view of Kotera (USP 4,340,519) and Creps (USP 4,358,887). As seen above, Applicants have cancelled claims 13-19, and respectfully traverse the rejection of claims 20-24. Applicants further respectfully submit that claims 20-24 and claims 25-36, which were added via the July 16, 2003 supplemental amendment, are allowable for at least the following reasons.

Applicants rely on MPEP § 2143, which states that:

> [t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first and third criteria of MPEP § 2143 cannot be met with the references noted in the Office Action in view of the present claim set.

The Cited References Do Not Suggest All Claim Recitations

Even if the first requirement of MPEP § 2143 can be satisfied with the cited references the Office Action (which it cannot, as explained below), the cited references still do not meet the third requirement, which is that "the prior art reference (or references when combined) must teach or suggest all the claim limitations."

Independent claim 25 affirmatively recites a drawn wire including a steel core covered with an intermediate coating layer having a bright looking surface. That is, the covered steel cor is a drawn steel core. As was discussed in the interview of November 25, 2003, the recitation of "a drawn wire" is a structural recitation, not a process recitation,[1] and none of the cited references teach a *drawn* wire. Takazawa teaches a "squeezing means" 4 of the zinc bath 3. However, these are not drawing dies. At the point 4 in Takazawa, the zinc is still in the fluid phase and thus deformation drawing by means of drawing dies cannot take place at this point. (The squeezing means 4 functions merely as a wiping means for the zinc coating.)

Creps and Kotera likewise do not teach a drawn wire (or a step of drawing a wire). The Office Action asserts that Creps teaches "wet drawing." Applicants respectfully submit that Creps does not teach any drawing at all. The PTO appears to equate the use of pullout rolls 30 and 31 of Creps for straightening to drawing (see rejection of claim 23 in the Office Action of April 14, 2003). However, the pipe of Creps is not drawn, as the rolls are merely for straightening the pipe.

During the interview of November 25, 2003, the shortcomings of the references in regard to a drawn wire were pointed out, and Examiner Gray agreed that the references did not appear to teach the recitation of a drawn wire.

Claims 20 and 32, which recite the method step of *drawing* a coated steel core to give a degree of brightness to the intermediate coating, is likewise allowable. While the drawing of claims 20 and 32 are process steps, the drawing step should be given patentable weight, as claims 20 and 32 are to a method of manufacturing a coated steel wire. Still further, assuming arguendo that Creps did teach drawing, the pullout rolls of Creps are used **after** the polyester coating is applied. Thus, the alleged drawing of Creps is not done in a way to "obtain a bright looking surface," as is required by the method claims.

* * * * *

[1] The recitation "said covered steel core being drawn" in cancelled claim 13 was not given patentable weight. During the interview, Examiner Gray indicated that "a drawn wire" in claim 25 would be given weight as a structural recitation.

Independent claim 25, as with cancelled claim 13, affirmatively recites that the coated steel wire has a bright looking surface. Further, the claim recites that the drawn covered steel core has a bright looking surface, and that the steel wire has, immediately on its intermediate coating, a polymer. Thus, the coated steel core has a bright looking surface, a surface on which a polymer is immediately attached.

The Office Action cites Takazawa as teaching "a steel core covered with an intermediate coating layer, having immediately upon said intermediate coating, a" polyester. However, Takazawa is completely silent in regard to teaching a bright surface on which a polymer is immediately attached. The Office Action correctly points out that in Takazawa, a polyester layer covers a zinc layer. Assuming *arguendo* that this polyester layer is immediately attached to the zinc layer, Takazawa is still completely silent in regard to a polyester layer immediately on a bright looking surface. **No evidence or rationale has been provided in the Office Action to substantiate an interpretation of the zinc layer of Takazawa as being bright looking.** The mere possibility that a zinc layer according to Takazawa could be bright (assuming *arguendo* that this is the case) does not satisfy the PTO's burden of proving that the zinc layer of Takazawa is indeed bright looking. (See MPEP § 2112, subsection 3: "The mere fact that a certain thing may result from a given set of circumstances is not sufficient." (citing *In re Robertson*, 196 F.3d 743, 745.))

In regard to the Creps reference, the Office Action states that Creps teaches "a steel core that is covered with an intermediate layer and immediately thereupon with a p lyester polymer." However, it is respectfully submitted that this is not the case. The Office Action correctly identifies Creps as teaching that polyester is placed over an intermediate layer. However, as was discussed in the interview of November 25, the polyester is not "immediately upon said intermediate coating," where the intermediate coating is a bright looking surface. Creps teaches that a chromate coating is deposited between the intermediate galvanized coating and the plastic coating. (Col. 3, lines 29-32). This is not a mere design issue, as Creps states that a step in the process

> is to *deposit a chromate compound on the shiny galvanized coating to retain its brightness*. In the final treatment, a clear plastic coating is applied from the group consisting of

> polyester resins, vinyl alkyds and fluorocarbons, generally from 0.002"to 0.006".

(Creps, col. 5, lines 42-47, emphasis added.) Thus, in Creps, a chromate compound is interposed between the intermediate layer and the polyester. As a result, Creps does not disclose the just claimed structure, and, in fact, teaches away from the present invention. If Creps and Takazawa are combined, the polyester layer would not be immediately disposed on the bright looking surface.

Still further, Takazawa fails to teach a "polyester being transparent." This not only is another shortcoming of the Takazawa reference, but also is suggestive that the zinc layer of Takazawa is not bright, as one would not go to the added expense of making a bright layer and then covering that layer with a material that prevents a user from seeing the bright layer.

Kotera is limited in its teachings to various types of polyester and the colors associated with those types of polyesters. Thus, it does not remedy the deficiencies of Creps and Takazawa.

Regarding claim 20, the recitation that a "polyester is immediately disposed on said intermediate coating layer" is not taught by Takazawa, Creps or Kotera for the reasons just mentioned.

* * * * *

In sum, even if the first requirement of MPEP § 2143 can be satisfied, the third requirement of MPEP § 2143 cannot be satisfied by the references cited in the Office Action, since the cited references do not teach each and every element of the present invention. Thus, the present independent claims are allowable for the above reasons and the dependent claims are allowable for at least the reason that they depend from allowable claims.

Lack of Suggestion or Motivation to Modify or Combine the References

MPEP § 2143.01, subsection 6 states that "the proposed modification cannot change the principle of operation of a reference – If the proposed modification or

combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959)." In *Ratti,* the CCPA held that the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in the primary reference." This substantial redesign would have resulted in changing a rigid seal to a resilient seal. Thus, a reference cannot be modified if the modification changes the principle of operation of the reference.

With the above in mind, Applicants note that Takazawa prominently teaches as its advantage "that heat remaining in the metal article [(e.g., wire)] freshly plated with a molten metal can be utilized for the subsequent baking treatment [i.e., baking on a synthetic resin to provide a coating of the resin (col. 1, lines, 26-27)], **instead** of rapidly cooling the hot plated article **with water** and re-heating the plated article." (Takazawa, col. 1, lines 52-56, emphasis added.) In contrast, Creps teaches that "the galvanizing . . . is **cooled down**. Cooling 25 takes place in an entire distance of twelve feet before it enters **the water-quenched** tank. In **the final treatment**, a clear plastic coating is applied." (Creps, col. 5, lines 32-45, emphasis added.)

That is, while Takazawa teaches as its principle of operation the use of residual heat to aid in the baking treatment of a resin on a plated wire, Creps, in contrast, teaches that any such galvanized wire is first cooled, thus removing any residual heat, before the plastic is provided on the wire. If the clear plastic of Creps were used in Takazawa, one of ordinary skill in the art would also first cool the wire of Takazawa as instructed by Creps, as Creps explicitly teaches to do so prior to utilizing its clear plastic. This would result in a modification that changes the principle of operation of Takazawa, and thus "the teachings of [Takazawa] are not sufficient to render the claims *prima facie* obvious."

Applicants anticipate that the PTO may make an argument that not all teachings of a second reference must be incorporated into a first reference when modifying that first reference to render a claim obvious. However, in this case, Applicants note that the step of cooling the wire in Creps is so fundamentally linked with applying the plastic coating in Creps that the skilled artisan would not readily ignore the cooling step

if implementing the plastic coating step of Creps in Takazawa. Assuming *arguendo* that it might be possible to apply the clear plastic of Creps on the Takazawa wire without cooling the wire of Takazawa, Applicants submit that such a combination, which would require the ordinary artisan to ignore the explicit teachings of Creps regarding cooling of the wire, **would be inventive, and not obvious**. Thus, the ordinary artisan would first cool the wire of Takazawa, thus changing Takazawa's principle of operation.

* * * * *

Applicants respectfully submit that the PTO has not carried its initial burden of pointing to some suggestion or motivation from within the prior art itself to combine the cited references, which are from different fields of endeavor (manufacturing metal strips and pipes versus steel wires). Therefore, it is unlikely that a person skilled in the art would have been motivated to combine Creps with Takazawa in the manner alleged. Indeed, considering that the references teach opposite methods, as noted above (i.e., cooling the wire in Creps before coating the wire with plastic), the artisan of ordinary skill would be discouraged from combining the references.

Moreover, even though Takazawa is directed to making a galvanized wire, Takazawa is silent as to any coating steps other than hot dipping (galvanizing) the wire in molten zinc. Thus, even if the references were combined, there would be no motivation to modify Creps, which would include a chromate coating, and produce Applicants' claimed structure and method.

New Claims

New claims 37-40 have been added. These claims are allowable based on their dependency from allowable claims, and due to the additional recitations regarding the degree of brightness. None of the cited references disclose or suggest a method of determining the degree of brightness of a surface as claimed in claims 37 and 38. Further, none of the cited references teach a bright surface as claimed in claims 39 and 40. Thus, the new claims are allowable for additional reasons.

Any N xt Offic Action Should N t Be A Final Office Action

As noted above, claims 25-31, timely submitted on July 16, 2003 and properly r ceived by the PTO on that day, were not substantively considered in the Office Action.

If claims 25-31 are not allowed and are rejected in view of the prior art in any next office action, Applicants respectfully submit that any next office action should be a non-final office action, as this would be the first time that these claims were rejected in view of the prior art, and these claims could not have been finally rejected in the present office action.

Conclusion

Applicants respectfully submit that the present application is in consideration for allowance.

If applicants have not accounted for any fees required by this Amendment, the Commissioner is hereby authorized to charge to our Deposit Account No. 19-0741. If applicants have not accounted for a required extension of time under 37 C.F.R. § 1.136, that extension is requested and the corresponding fee should be charged to ur Deposit Account.

Examiner Gray is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date January 7, 2004

By _____

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Title: STEEL WIRE WITH BRIGHT LOOKING SURFACE
Inventor(s): Ludo ADRIAENSEN et al. Dkt. No. 016782/0230
Appl. No.: 09/857,600
Filed:: June 8, 2001

X Supplemental Amendment Tramsmittal
X Supplemental Amendment (6 pp)
X Check No 30141 $156 additional claim fee

Date Due: N/A
GL/ev/MJC/jm Inspected by:

Assistant Commissioner for Patents:

Please acknowledge receipt of the above-identified documents by applying the U.S. Patent and Trademark Office receipt stamp hereto and mailing this card.

Respectfully,

Foley & Lardner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ludo ADRIAENSEN, et al.

Title: STEEL WIRE WITH BRIGHT LOOKING SURFACE

Appl. No.: 09/857,600

Filing Date: 06/08/2001

Examiner: J. Gray

Art Unit: 1774

SUPPLEMENTAL AMENDMENT

Mail Stop FEE AMENDMENT
Commissioner for Patents
Alexandria, Virginia 22313-1450

Sir:

This communication is supplemental to the paper filed in response to the Office Action dated April 14, 2003, concerning the above-referenced patent application as provided below.

The amendments presented below are in compliance with the revised amendment format permitted in the Notice from the Office of Patent Legal Administration of the U.S. Patent and Trademark Office dated February 10, 2003, and published at 1267 OG 106 on February 25, 2003. Thus, the provisions of 37 CFR 1.121(a), (b), (c) and (d) are waived for amendments made in this application to the claims, specification, and drawings.

Please amend the application as follows:

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the Claims:

Claims 1-12 cancelled

13. (previously presented) A coated steel wire having a bright looking surface,

said steel wire having a steel core,

said steel core being covered with an intermediate coating layer,

said covered steel core being drawn to obtain said bright looking surface, said steel wire having immediately upon said intermediate coating a polymer, said polymer being a polyester, said polyester being transparent.

14. (previously presented) A steel wire according to claim 13, said polymer comprising a transparent coloring agent.

15. (previously presented) A steel wire according to claim 13,

wherein said polymer is a thermoplastic polyester selected from the group consisting of polyethylene terephtalate, polybutylene terephtalate and polyethylene naphtenate.

16. (previously presented) A steel wire according to claim 15,

wherein said thermoplastic polyester is polyethylene terephtalate.

17. (previously presented) A steel wire according to claim 14, wherein said coloring agent is organic.

18. (previously presented) A steel wire according to 14, wherein said intermediate coating is a metallic coating comprising at least one of a copper coating, a copper alloy coating, a zinc coating, a zinc alloy coating, a nickel coating, a nickel alloy coating, a tin coating and a tin alloy coating.

19. (previously presented) A steel wire according to claim 13, wherein said intermediate coating is a coating comprising at least one of a copper-tin sulfate coating and a copper-sulfate coating.

20. (currently amended) A method of manufacturing a coated steel wire having a bright looking surface, said method comprising the following steps:

(a) providing a steel core;

(b) coating said steel core with an intermediate coating layer;

(c) giving a degree of brightness to said intermediate coating by drawing said coated steel core;

(d) using a transparent thermoplastic polyester;

(e) further coating said bright steel core with an intermediate coating layer with said polyester, wherein said polyester is immediately disposed on said intermediate coating layer.

21. (previously presented) A method according to claim 20,

wherein said coating with said intermediate coating layer is done by a hot dip operation.

22. (previously presented) A method according to claim 20,

said method further comprising the step of coloring said polyester.

23. (previously presented) A method according to claim 20,

wherein said giving of a degree of brightness to said intermediate coating is done by wet drawing.

24. (previously presented) A method according to claim 20,

wherein said further coating with a polyester is done by an extrusion process.

25. (New) A steel wire having a coating having a bright looking surface, comprising:

a drawn wire, said drawn wire including a steel core covered with an intermediate coating layer, said intermediate coating layer having a bright looking surface; and

a polyester coating immediately upon said intermediate coating, said polyester being transparent.

26. (New) A steel wire according to claim 25, said polyester comprising a transparent coloring agent.

27. (New) A steel wire according to claim 25, wherein said polyester is a thermoplastic polyester selected from the group consisting of polyethylene terephtalate, polybutylene terephtalate and polyethylene naphtenate.

28. (New) A steel wire according to claim 27, wherein said thermoplastic polyester is polyethylene terephtalate.

29. (New) A steel wire according to claim 26, wherein said coloring agent is organic.

30. (New) A steel wire according to claim 26, wherein said intermediate coating is a metallic coating comprising at least one of a copper coating, a copper alloy coating, a zinc coating, a zinc alloy coating, a nickel coating, a nickel alloy coating, a tin coating and a tin alloy coating.

31. (New) A steel wire according to claim 25, wherein said intermediate coating is a coating comprising at least one of a copper-tin sulfate coating and a copper-sulfate coating.

32. (New) A method of manufacturing a coated steel wire having a bright looking surface, said method comprising:

(a) providing a steel core;

(b) coating said ste l cor with an int rmediat coating layer;

(c) drawing said coated steel core to obtain a bright looking surface; and

(d) immediately depositing on said intermediate coating layer a transparent polyester to coat said intermediate coating layer of said steel core.

33. (New) A method according to claim 32, wherein said coating said steel core with said intermediate coating layer is performed by a hot dip operation.

34. (New) A method according to claim 32, wherein said method further comprises coloring said polyester.

35. (New) A method according to claim 32, wherein said bright looking surface is obtained by wet drawing.

36. (New) A method according to claim 32, wherein depositing the polyester is performed by an extrusion process.

REMARKS

Prior to continued examination of the present application, Applicants respectfully request that the above claims be entered into the application. Prior to this paper, claims 13-24 were pending in the present application. By this paper, claims 25-36 have been added, and no claims have been deleted. Support for the added claims can be found in claims 13-24. Accordingly, Applicants respectfully submit that no new matter has been added.

Applicants respectfully submit that the present application is in consideration for allowance.

If applicants have not accounted for any fees required by this Amendment, the Commissioner is hereby authorized to charge to our Deposit Account No. 19-0741. If applicants have not accounted for a required extension of time under 37 C.F.R. § 1.136, that extension is requested and the corresponding fee should be charged to our Deposit Account.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date July 16, 2003

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